

Agricultural Marketing Service, USDA

§ 42.102

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Subpart A—Definitions

§ 42.101 Meaning of words.

Words used in this part in the singular form shall be considered to im-

port the plural, or vice versa, as the case may demand.

[31 FR 4687, Mar. 19, 1966; 31 FR 4949, Mar. 25, 1966; Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 42.102 Definitions, general.

For the purpose of this part, unless the context otherwise requires, the following terms shall be construed, respectively, to mean:

Acceptable Quality Level (AQL). The maximum number of defects per hundred units (DHU) which is acceptable as a process average. Lots, or portions of production, having a quality level equal to a specified AQL will be accepted approximately 95 percent of the time when using the sampling plans prescribed for the AQL.

Acceptance Number (Ac). The number in a sampling plan that indicates the maximum number of defects permitted in a sample in order to consider a lot as meeting a specific requirement.

Administrator. The Administrator of the Agricultural Marketing Service (AMS) of the Department or any other officer or employee of the Agency to whom there has heretofore been delegated, or to whom there may hereafter be delegated, the authority to act in his stead.

Basic Inspection Period. A specified period of consecutive production designated for on-line inspection (e.g., one shift's production, one day's production, etc.).

Condition. The degree of acceptability of the container with respect to freedom from defects which affect the serviceability, including appearance as well as usability, of the container for its intended purpose.

Cumulative Sum Sampling (CuSum) Plan. An on-line sampling plan that accumulates the number of defects which exceed the subgroup tolerance ("T") in a series of consecutive subgroups. Terms specified to the CuSum sampling plans are:

(a) *Acceptance Limit ("L").* The maximum accumulation of defects allowed to exceed the subgroup tolerance ("T") in any subgroup or consecutive subgroups.

(b) *CuSum value.* The accumulated number of defects that exceed the subgroup tolerance ("T").

(c) *Subgroup tolerance* (“T”). The allowable number of defects in any subgroup.

(d) *Starting value* (“S”). The initial CuSum value used to begin a CuSum sampling plan.

Defect. Any nonconformance of a container from specified requirements.

Defect classifications. The terms used to denote the severity of a defect. The terms are as follows:

(a) *Critical defect.* A defect that seriously affects, or is likely to seriously affect, the usability of the container for its intended purpose.

(b) *Major defect.* A defect that materially affects, or is likely to materially affect, the usability of the container for its intended purpose.

(c) *Minor defect.* A defect that materially affects the appearance of the container but is not likely to affect the usability of the container for its intended purpose.

(d) *Insignificant defect.* A flaw in the container that does not materially affect the appearance and does not affect usability of the container for its intended purpose. When performing examinations, insignificant defects shall not be recorded.

Defective. A container which has one or more defects.

Department. The U.S. Department of Agriculture.

Double sampling. A sampling scheme which involves use of two independently drawn but related samples, a first sample and a second sample which is added to the first to form a total sample size. A double sampling plan consists of first and total sample sizes with associated acceptance and rejection criteria. The first sample must be inspected first, and if possible, a decision as to acceptance or rejection of the lot made before a second sample is inspected. When the decision cannot be made on the first sample, a second sample is inspected; the decision to accept or reject is based on the total sample size.

Lot. A collection of filled food containers of the same size, type, and style. The term shall mean “inspection lot,” i.e., a collection of units of product from which a sample is to be drawn and inspected to determine conformance with the applicable acceptance

criteria. An inspection lot may differ from a collection of units designated as a lot for other purposes (e.g., production lot, shipping lot, etc.).

On-line sampling. The random selection of samples from a production line.

Operating Characteristic Curve (OC Curve). A curve that gives the probability of acceptance as a function of the quality level of the lot or the quality level of the portion of production. It shows the discriminatory power of a sampling plan, i.e., how the probability of accepting a lot, or portion of production, varies with the quality of the containers offered for inspection.

Origin inspection. An inspection made at any location where the filled containers are examined prior to shipment or transfer to the purchaser.

Primary container. The immediate container in which the product is packaged and which serves to protect, preserve, and maintain the condition of the product. It may be metal, glass, fiber, wood, textile, plastic, paper, or any other suitable type of material and may be supplemented by liners, overwraps, or other protective materials.

Probability of acceptance—(a) For stationary lot sampling. The chance that a lot with a given level of quality will be accepted. Probability of acceptance is synonymous with “Percent of Lots Expected to be Accepted.” The probability of acceptance is normally designated as “Pa” but is designated as “Pas” when referring to skip lot sampling and inspection.

(b) *For On-line Sampling.* The chance that a portion of production with a given level of quality will be accepted. Probability of acceptance is synonymous with “Percent of Production Expected to be Accepted.” The probability of acceptance is normally designated as “Pa.” In on-line sampling inspection, the probability of acceptance of any portion of production depends on the sample results obtained from the preceding portions. The probability of acceptance values associated with these procedures are the values which would be expected if a large number of samples are to be inspected. For the CuSum plans referenced in this standard, the probability of acceptance at the Acceptable Quality Level (AQL) is

approximately 95 percent. The starting value ("S") associated with each CuSum plan helps to make the probability of acceptance of the first portions of production of a basic inspection period as close as possible to 95 percent.

Random sampling. A process of selecting a sample from a lot, or portion of production, whereby each unit in the lot of portion of production, has an equal chance of being chosen.

Rejection number (Re). The number in a sampling plan that indicates the minimum number of defects in a sample that will cause a lot to fail a specific requirement.

Sample. Any number of sample units which are to be used for inspection.

Sample size (n). The number of sample units which are to be included in the sample.

Sample unit. The individual container including any component parts.

Sampling plan. Any plan stating the number of sample units to be included in the sample as well as the corresponding plan parameters used to make acceptance and rejection decisions.

Secondary container. The container in which one or more primary containers are packed. For example, a shipping case containing canned product.

Shipping case. The container in which the product or primary containers of the product are placed to protect, preserve, and maintain the condition of the product during transit or storage. The shipping case may include strapping, liners or other protective material.

Single sampling. A sampling scheme where the decision to accept or reject an inspection lot with respect to a specified requirement is made after the inspection of a single sample. A single sampling plan consists of a single sample size with associated acceptance and rejection criteria.

Stationary lot sampling. The process of randomly selecting sample units from a lot whose production has been completed. This type of lot is usually stored in a warehouse or in some other storage area and is offered "in toto" for inspection.

Subgroup. A group of sample units representing a portion of production.

Total defects. The sum of critical, major, and minor defects.

User. The person or agency at whose request inspection is conducted.

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Subpart B—Procedures for Stationary Lot Sampling and Inspection

§ 42.103 Purpose and scope.

(a) This subpart outlines the procedure to be used to establish the condition of containers in stationary lots of packaged foods. This subpart shall be used to determine the acceptability of a lot based on specified acceptable quality levels and defects referenced in § 42.104 or any alternative plan which is approved by the Administrator. In addition, any other sampling plan in the tables with a larger first sample size than that indicated by the lot size range may be specified when approved by the Administrator. This subpart or approved alternative plan will be applied when a Government agency or private user of the inspection or grading services requests that filled primary containers or shipping cases, or both, be certified for condition. Unless the request for certification specifically asks that only the primary container or only the shipping case be examined, both containers will be examined.

(b) Unless otherwise specified by the user of service, this subpart will not apply to inspection lots of less than 50 shipping cases or to inspection lots of less than 300 primary containers. When the primary container is the shipping case, the shipping case limit will apply. When the lot size exceeds either the 50 shipping case limit or the 300 primary container limit or both, the provisions of paragraph (a) of this section will apply.

(c) Under certain conditions, special procedures (Skip Lot Sampling and Inspection) may be used to determine the condition of containers in stationary lots of packaged foods. Subpart C sets